What is claimed is:

1. A method of forming tungsten film on a substrate in a reaction chamber, the method comprising:

(a) positioning the substrate in the reaction chamber;

(b) exposing the substrate to a boron-containing species to form a boron-containing layer;

(c) contacting the boron-containing layer with a tungsten-containing precursor to form a tungsten nucleation layer; and

(d) depositing a bulk tungsten layer over the tungsten nucleation layer to form the tungsten film.

2. The method of claim 1, wherein the reaction chamber comprises multiple stations.

3. The method of claim 1, wherein the sheet resistance of the tungsten film is no greater than about 15$\mu\Omega$-cm.

4. The method of claim 1, wherein the thickness of the tungsten film ranges between about 5 Angstroms and about 1,000 Angstroms.

5. The method of claim 4, wherein the thickness of the tungsten film is no greater than about 500 Angstroms.

6. The method of claim 1, wherein the thickness of the tungsten nucleation layer ranges between about 10 Angstroms and about 30 Angstroms.

7. The method of claim 1, further comprising, after (b) and before (c), and after (c) and before (d), purging the reaction chamber.

8. The method of claim 7, wherein purging the reaction chamber comprises flowing carrier gas through the reaction chamber.

9. The method of claim 8, wherein the carrier gas comprises at least one of argon, hydrogen, nitrogen and helium.

10. The method of claim 1, wherein the substrate temperature during (b) and (c) is between about 200 degrees Celsius and about 475 degrees Celsius.

11. The method of claim 1, wherein the reaction chamber pressure during (b) and (c) is between about 1 Torr and about 350 Torr.

12. The method of claim 1, wherein the boron-containing species is a borane.

13. The method of claim 12, wherein the borane is diborane (B_2H_6).

14. The method of claim 1 wherein the boron-containing layer formed in (b) has thickness of between about 3 and 15 Angstroms.

15. The method of claim 1, wherein tungsten-containing precursor is at least one of WF_6, WCl_6 and $W(CO)_6$.

16. The method of claim 1 wherein (c) occurs for a time period sufficient to consume substantially all of the boron in the boron-containing layer.

17. The method of claim 1, further comprising, prior to exposing the substrate to the boron-containing species in (b),

stabilizing a flow of the boron-containing species by diverting the flow to an exhaust port without passing through the reaction chamber; and then

pressurizing a gas line leading to the reaction chamber by flowing the boron-containing species to the gas line prior to allowing the boron-containing species to enter the reaction chamber.

18. The method of claim 17, wherein the boron-containing species is delivered to the reaction chamber in (b) in a dilution gas comprising at least one of argon, hydrogen, nitrogen, helium and silane.

19. The method of claim 1, further comprising, prior to contacting the boron-containing layer with a tungsten-containing precursor in (c),

stabilizing a flow of the tungsten-containing precursor by diverting the flow to an exhaust port without passing through the reaction chamber; and then

pressurizing a gas line leading to the reaction chamber by flowing the tungsten-containing precursor to the gas line prior to allowing the tungsten-containing precursor to enter the reaction chamber.

20. The method of claim 19, wherein the tungsten-containing precursor is delivered to the reaction chamber in (b) in a dilution gas comprising at least one of argon, hydrogen, nitrogen, and helium.

21. The method of claim 1, wherein (d) involves using a CVD process.

22. The method of claim 1, further comprising repeating (b) and (c) prior to (d).

23. The method of claim 1, further comprising, after (a) and before (b):

exposing the substrate to a silane; and thereafter

contacting the substrate with a second tungsten-containing precursor to form a portion of the tungsten nucleation layer.

24. The method of claim 23, wherein the second tungsten-containing precursor is the same chemical compound as the tungsten-containing precursor in (c).

25. The method of claim 23, further comprising repeating exposing the substrate to the silane and contacting the substrate with the second tungsten-containing precursor.

26. The method of claim 23, further comprising after contacting the substrate with a second tungsten-containing precursor to form a portion of the tungsten nucleation layer and before (b), purging the reaction chamber.

27. The method of claim 23, wherein the substrate temperature during exposing the substrate to a silane and contacting the substrate with a second tungsten-containing precursor is between about 200 degrees Celsius and about 475 degrees Celsius.

28. The method of claim 23, wherein the reaction chamber pressure during exposing the substrate to a silane and contacting the substrate with a second tungsten-containing precursor is between about 1 Torr and about 350 Torr.

29. The method of claim 23, wherein the silane comprises at least one of SiH_4, disilane, and tetrasilane.

30. The method of claim 23, further comprising, prior to exposing the substrate to a silane,

stabilizing a flow of the silane by diverting the flow to an exhaust port without passing through the reaction chamber; and then

pressurizing a gas line leading to the reaction chamber by flowing the silane to the gas line prior to allowing the silane to enter the reaction chamber.

31. The method of claim 30, wherein the silane is delivered to the reaction chamber in a dilution gas comprising at least one of argon, hydrogen, nitrogen, and helium.

32. The method of claim 23, further comprising, prior to contacting the substrate with a second tungsten-containing precursor,

stabilizing a flow of the second tungsten-containing precursor by diverting the flow to an exhaust port without passing through the reaction chamber; and then

pressurizing a gas line leading to the reaction chamber by flowing the second tungsten-containing precursor to the gas line prior to allowing the second tungsten-containing precursor to enter the reaction chamber.

33. The method of claim 32, wherein the second tungsten-containing precursor is delivered to the reaction chamber in a dilution gas comprising at least one of argon, hydrogen, nitrogen, and helium.

34. A method of forming a tungsten film on a substrate in a reaction chamber, the method comprising:

(a) positioning the substrate in a reaction chamber;

(b) exposing the substrate to a silane;

(c) contacting the substrate with a tungsten-containing precursor to form a portion of a tungsten nucleation layer;

(d) exposing the substrate to a boron-containing species to form a boron-containing layer;

(e) contacting the boron-containing layer with a second tungsten-containing precursor to form the tungsten nucleation layer; and

(f) depositing a bulk tungsten layer over the tungsten nucleation layer to form the tungsten film.

35. The method of claim 34, further comprising exposing the substrate to a plasma after (c) or (e).

36. The method of claim 35, wherein the plasma is generated from hydrogen, helium, argon, nitrogen, carbon tetrafluoride, hexafluoroethane, or a combination of two or more of these.

37. The method of claim 34, further comprising repeating (b) through (e) at least once.

38. The method of claim 34, further comprising, prior to (b), exposing the substrate to a tungsten-containing precursor, which may be the same or different from the tungsten-containing precursor employed in (c).

39. The method of claim 34, wherein the second tungsten-containing precursor may be the same or different from the tungsten-containing precursor employed in (c).